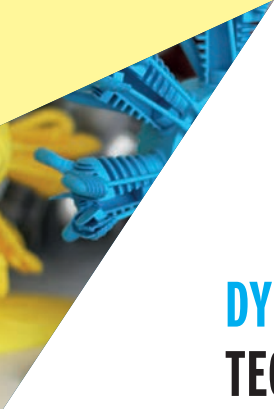


**DYE
MANSION**



DYEMANSION
TECHNOLOGY AND PORTFOLIO



ABOUT DYEMANSION

Global leader in
additive manufacturing
finishing systems

DyeMansion is a Munich, Germany-based company that offers a variety of high volume finishing systems for easy 'Print-to-Product' workflows that transform raw, 3D-printed polymer parts into high-value consumer and industrial products.

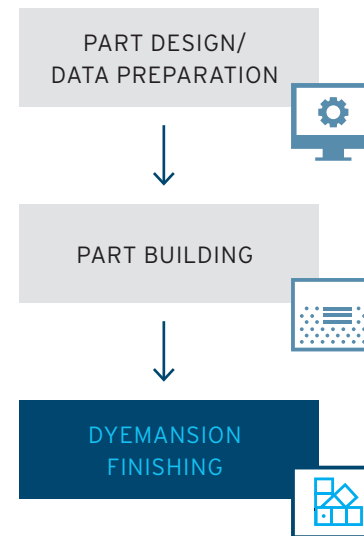
With the ability to deliver precision coloring and high quality finishes for even the most exact specifications, DyeMansion has quickly established itself as the global leader in additive manufacturing finishing systems and is already trusted by more than four hundred customers, including leading global manufacturers in diverse industries, such as eyewear, automotive, retail, medical, and sports equipment.

**WE TURN 3D-PRINTED RAW PARTS
INTO HIGH-VALUE PRODUCTS.**



DYEMANSION TECHNOLOGY

CLOSING THE MANUFACTURING GAP



DyeMansion technology handles every step of the post-production process for raw, 3D-printed polymer parts and transforms them into high-value products.

DyeMansion works with all major industrial, powder-based 3D printing systems, including EOS, HP, 3D Systems or Prodways and can deliver high-volume production for any type of product, from luxury sunglasses to mission-critical automotive parts.

- ✓ Plug & play workflow
- ✓ Consistent, reproducible process
- ✓ Unlimited color options
- ✓ High volumes

**COMPATIBLE WITH ALL
POWDER-BED TECHNOLOGIES**



COMPATIBLE MATERIALS

— PA11 — PA12 — TPU — PA6

More on request

DYEMANSION 'PRINT-TO-PRODUCT' WORKFLOW

Our automated, high-throughput cleaning, surfacing, and coloring solutions can easily handle multi-client runs for different parts such as additive manufactured industrial or consumer products. The combined three-step workflow closes the manufacturing gap and enables scaling from prototyping or small series to high-volume manufacturing.



STEP 1 **CLEANING** DyeMansion Powershot C

- ✓ Automated, damage-preventive fine-depowdering in 10 minutes
- ✓ Reduce manpower, costs and lead times
- ✓ Very easy part handling



STEP 2 **SURFACING** DyeMansion Powershot S

- ✓ Automated, proprietary blasting process
- ✓ Creates dirt- and scratch-resistant surfaces
- ✓ Improves look, feel and color quality



STEP 3 **COLORING** DyeMansion DM60 + DM60 Reservoir

- ✓ Automated coloring for polymer parts
- ✓ Unlimited color options
- ✓ Long-lasting, UV-resistant colors
- ✓ Clean process through color cartridges
- ✓ DM60 Reservoir: Black color reusage (5x)





CLEANING

DyeMansion Powershot C

Highly efficient fine-depowdering for powder-based polymer parts.

10 minute cycle time

Reduce cost and lead-time

A single run takes approximately 10 minutes and replaces up to four manual blasting cabinets, reducing manpower, cost, and time.

Damage prevention

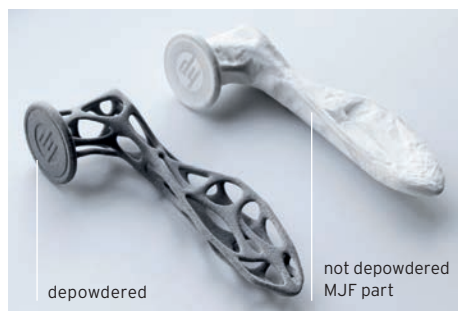
Our proprietary blasting nozzle design and consistent operation of our rotary basket ensure reproducible results, while eliminating risk of damage, providing the foundation for further post-processing steps, such as coloring and homogeneous color distribution.

Flexible use

The Powershot C is able to automatically remove excess powder from most parts. The possibility to manually blast big or complex parts is also given by removing the rotary basket inside the cabinet.

Powder-free parts

Integrated ionizing nozzles provide powder-free parts. Our customizable cyclone completely separates powder from glass beads and the chamber is cleaned automatically after each run.



Certifications

ATEX directive 1999/92/EG & 2014/34/EU
CE guideline 2006/42/EG

SURFACING

DyeMansion Powershot S

The new surface quality standard for AM plastics.



10 minutes cycle time

The key to consumer products

DyeMansion's sophisticated surfacing technology delivers closed pores and an improved surface quality, transforming porous, vulnerable powder-based plastics into long lasting, finished products, which is key for high value 3D-printed consumer products, such as eyewear.

Improved part properties

Our proprietary finishing process compacts the surface and achieves unsurpassed results. Functionally and visually. The parts have more scratch-resistance, gloss and homogeneous color distribution.

Compatible with every geometry

Fast, cost-effective and compatible with all geometries. Blasting with the DyeMansion Powershot S is an efficient alternative to time-consuming tumbling without material loss.

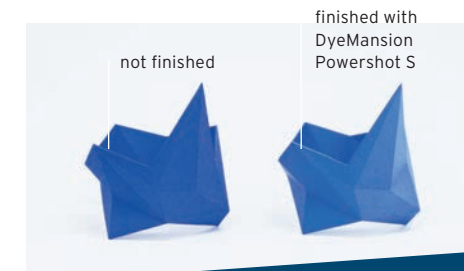
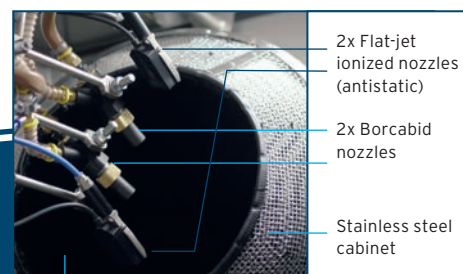


Photo: Shapeways, Design: Bluuips



- 2x Flat-jet ionized nozzles (antistatic)
- 2x Borcabid nozzles
- Stainless steel cabinet

Up to 75% of a full EOS P3 or HP Jet Fusion build job per run.

Customized extras In order to meet the requirements for powder-based AM plastics, we added some extra features to the Powershot cabinets.

- Removable rotary basket for flexible use
- Stainless steel cabinet
- Special process cycle
- Special lining to protect parts and blasting media
- Small load carrier for leftover powder and blasting media
- Special coated filter



2.5 hour cycle time

IN-DEPTH: COLORING

DyeMansion DM60 + DM60 Reservoir

Simply insert parts, choose a color cartridge and press start.

Plug & play system

The DM60 is user-friendly and achieves consistent coloring results to meet the requirements for high-value, end-use products. Simply insert parts, choose a color cartridge and press start.

Best color quality in AM

Our coloring solution is optimized for powder-based materials, like PA11/12, TPU and Alumide and ensures the best color quality on the market today. The colored plastic parts are UV resistant, skin-safe, long-lasting and not washable.

Clean process

Our color cartridges provide a contact free and clean dyeing process with no manual pigment handling. Color cartridges are available in four different sizes and have a scalable dyeing volume from 10 to more than 50 liters. An integrated cleaning program ensures fast color changes.

No added material

Submerged in a water bath, our dyes penetrate the plastic through a chemical reaction. Using heat and pressure DyeMansion is able to deliver consistent penetration depth at approximately 0.2 mm. No material is added and surface is colored homogeneously in our sophisticated dyeing process.



CAPACITY (PER RUN)

Up to a full EOS P3 or HP JET Fusion job

PENETRATION DEPTH OF THE DYE

Up to 0,2 mm

COLOR CARTRIDGES

S, M, L, XL

MAX. PART SIZE (Ø X H IN MM)

390 x 360 mm

CERTIFICATIONS

CE

UL 61010-1 & UL 61010-2-010

ASME Sec. VIII Div.1

Some countries demand specific pressure vessel requirements. For further questions, please contact our sales team.

EXTENSIVE COLOR DATABASE WITH UNIQUE COLOR OPTIONS

Final appearance and color availability is determined by raw material. White parts provide the most color choices, flexibility and support the whole RAL and Pantone spectrum.

COLOR OPTIONS

White raw material



RAL/Pantone colors

Color: RAL 3020

Photo: Formrise



Custom colors

Custom ic! berlin colors: Faded Mint, Powdered Beige, Ivy Green

Photo: ic! Berlin



Corporate colors

Color: Corporate Proglove Orange

Photo: Proglove



17 Standard colors

Grey raw material



Deep black

Certain color tones: Beta

DYEMANSION SERVICES

TRAINING SERVICES

Customer product development support, coaching, know-how transfer

TECHNICAL SERVICES

Installation, maintenance, repairs

ON-DEMAND FINISHING SERVICES

On-demand surface treatment and coloring, benchmarking, custom color developments



APPLICATIONS & CUSTOMER SEGMENTS

Our ability to deliver consistent, high-quality surface finishes and a full range of colors at high volumes for industrial, medical and consumer applications is why our technology is already trusted by more than four-hundred customers to deliver innovative high-value luxury goods as well as mission-critical automotive spare parts.

DyeMansion technology partners & customers

- ACRON
- ANDREAS HETTICH
- BLUE PRODUCTION
- BMW
- CREABIS
- EOS
- FKM
- FORMRISE
- HASENAUER & HESSER
- HP
- KUHNSTOFF
- MATERIALISE
- SCULPTEO
- SHAPEWAYS



Industrial

Smartglove by Proglove

Photo: Proglove

Retail

Light by Licht³

Photo: Licht³



Consumer

Eyewear by ic! berlin

Photo: ic! berlin



Medical

Orthotics by Pohlig

Photo: Pohlig

3D service providers

Service providers employ DyeMansion technology to offer fast-turn color for their customers, while expanding the breadth of their offerings. With DyeMansion as a partner, service providers can now scale their output, while improving the quality and adding the magic of consistent color to their products.



"With DyeMansion we found an experienced partner helping us on our way to functional additive manufactured spare parts. From now on, it will be possible to produce existing spare parts that meet Daimler exacting technical specifications and surface quality standards."

RALF ANDERHOFSTADT
Head of CSP 3DD Daimler Buses
Evobus GmbH



"Shapeways is excited to announce a partnership with DyeMansion which is solving the post-production challenges for powder based 3D printing systems. With the Powershot S system, we are now getting closer to the quality level expected from traditional manufacturing for end-use products."

BLAIR GEORGAKAS
Product Manager
3D Printing Materials
Shapeways



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free of charge

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